Moisture Meter "MOISTEC 2 in 1"
User Manual

Application

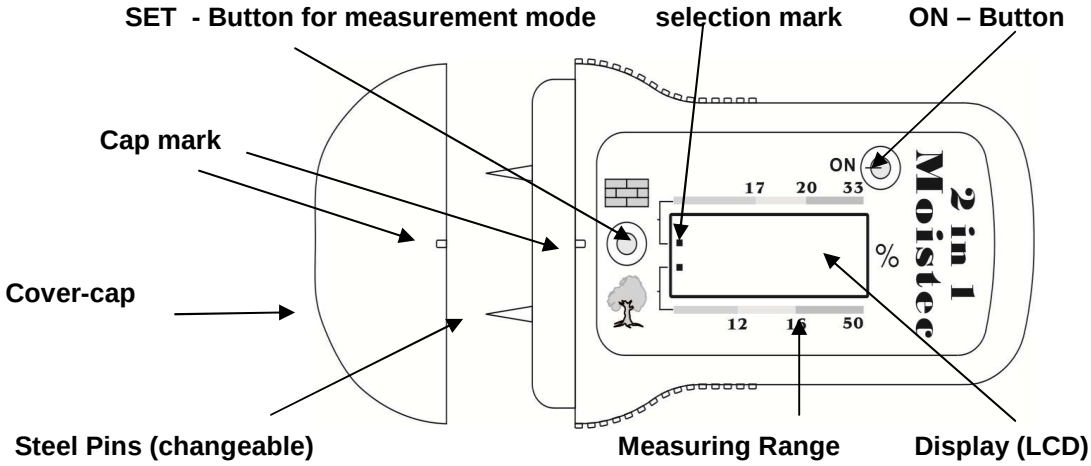
The Moisture Meter **MOISTEC 2 in 1** is a miniature electronic device for measuring of moisture contents in wood or in building materials (e.g. brick, plaster, cement mortar, lime mortar, concrete, etc.).

Measuring method

As most other moisture meters the **MOISTEC 2 in 1** measures the resistance of wood or of building materials. The wood appropriate resistance characteristic has been developed as an average of all European wood species (In case of other species, use correction tables for wood).

Technical data	Wood Products	Building Materials
Measuring Range	5-50 %	1.5-33 %
Accuracy Without correction tables for Wood temperature 15-25°C		
within 5-15 %	± 2 %	
within 16-28 %	± 3 %	approximate measurement
With correction tables for Wood temperature 0-60°C		
within 5-15 %	± 1.5 %	
within 16-28 %	± 2.0 %	
29-50 %	approximate measurement	

Resolution	0.1 %
Display	LCD, 3.5 digits
Power consumption	approx. 1.3 mA
Power	DC 12 V, battery type 23A
Housing	ABS blue
Weight	42g
Size	82×46×16mm



General
The meter is equipped with an "auto calibration function" as well as an turn off function (automatically) after the meter has been turned on (after approx. 40 seconds). The battery compartment is at the back side of the meter.

Auto - Calibration
Accomplish this calibration procedure with closed cap. Don't place any materials at the needles of the meter during calibration. First use your left hand and keep pressing the button “SET”, then use your right hand push the button “ON”, until a “CALI” will be displayed on the LCD. Then release both of the buttons, then wait for approx. 3 seconds. A flashing “End” appears on the LCD until the power turn off automatically,. Calibration has been finished.
Note: Because the meter has a storage function of setting data, so the calibration needs not to be done every time. We recommend you to accomplish this procedure in case of larger temperature change (internal areas – external areas).

Set the Measurement Mode
Press the "ON" button, then push the "SET" button, until "trEE" or "bdi" appears on the LCD. Then release the "SET" button. The "▪" mark indicates the selected measuring mode.
trEE = wood, bdi = building dampness

Measuring

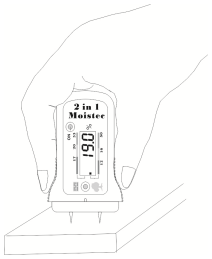


Fig. 1

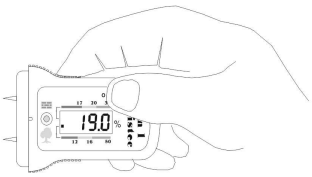


Fig. 2

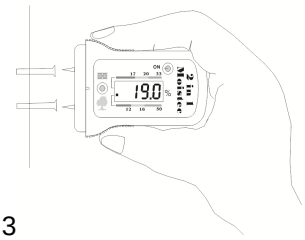


Fig. 3

Wood Products	Building Materials
Measurement of wood, please insert the electrodes (Pins) into the wood (See Fig.1). Press the ON button and the result will appear on the LCD. (See Fig.2) Please follow the remarks listed below: ● Ensure that the meter is set on "trEE" mode. ("▪" mark on down side of LCD) ● The needles (Pins) should be pressed in the wood across to the fiber direction. ● The needles should be inserted into the depth of approx. 1/4 ~1/5 of the thickness of the timber. If the timber is too thick, use thin nails. Hammer the nails into the wood connect them with the electrodes (See Fig.3). ● If the wood is very dry (moisture < 8%) please wait until the result stabilizes. Low moisture (<5%) is not indicated.	Measurement of building material in order to conduct a measurement touch the material with the electrodes. Press the ON button and the result will appear on the LCD. Please follow the remarks listed below: Ensure that the meter is set on "bdi" mode. ("▪" mark on up side of LCD) If the material is too hard, use nails. Hammer the nails into the material and connect them with the electrodes (See Fig.3). If the material is very dry (moisture <5%) please wait until the result stabilizes.

Measuring range / Indication range

Wood Products	Building Materials
The measuring range of the **MOISTEC 2 in 1** meter is 5% - 50% moisture content. All results below 5% (e.g. 0.0 or 4.8, etc.) indicate only that the moisture contents is below 5% . All results equal to 50% indicate only that the moisture contents is 50% or above 50% The meter displays the approximate Moisture content of wood in colour code. Green - the material is dry (Reading 0-12) Yellow - the material is medium dry or wet (Between 12 - 16) Red - the material is wet (Reading Above 16)	The meter displays the approximate moisture content of building material in colour code. Green - the material is dry (Reading below 17) Yellow - the material is medium dry or wet (Between17 - 20) Red - the material is wet (Reading above 20) High result indicates a high moisture content and vice versa.

Correction tables for wood
The accuracy (within the range of 5%-50%) of the results can be improved by using the correction tables and formula mentioned below.

Wood Temp.	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
Factor (T)	1.23	1.16	1.10	1.05	1.00	0.95	0.91	0.87	0.84	0.81	0.78	0.76	0.74

Wood Species	oak, beech, walnut, poplar	birch, maple, ash	pine, spruce, fir
Species factor (G)	0.95	1.00	1.05

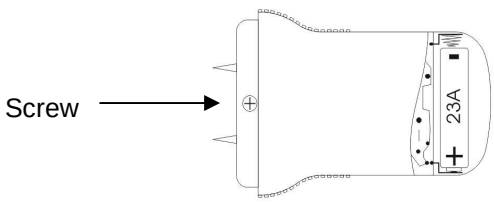
Calculating the correct result : **WR = WZ * G * T**

W_R - real moisture content (corrected)
W_Z - moisture content measured
G - wood type factor
T - wood temperature factor

Example : OAK, 20°C
W_R = 8.5 x 0.95 x 1.00 = 8.0%

Battery

The meter is equipped with a low battery detector. When the power drops below the acceptable level, a flashing sign "b" appears on the LCD while the meter is being using. This indication means that the battery has expired and should be replaced by a new one. To replace the battery unscrew the two metal screws on the cover. Remove the old battery and insert the new one. Screw the cover back on.



Battery Type DC 12V, 23A

Warranty

Our company warrants the Moisture Meter **MOISTEC 2 in 1** to be free from malfunctions and defects in both materials and workmanship for one year (12 Months) from the date of purchase.
If the Moisture Meter **MOISTEC 2 in 1** does not function properly during the warranty period due to defects in either materials or workmanship, our company will, at its option, either repair or replace the instrument without charge, subject to the conditions and limitations stated herein. Such repair service will include any necessary adjustments and replacement parts. Freight charges excluded.

Limitations

This warranty becomes null and void if you fail to pack your **MOISTEC 2 in 1** in a manner consistent with the original product packaging and damage occurs during product shipment.
This warranty does not cover: circumstance beyond our company's control; service required as the result of unauthorized modifications or service; misuse, abuse to follow our company operating or maintenance instructions. Repair or replacement without charge is our company's only obligation under this warranty. Our company will not be responsible for any special, consequential or incidental damages resulting from the purchase, use, or improper functioning of this equipment regardless of the cause. Such damages for which our company will not be responsible include, but are not limited to, loss of revenue or profit, downtime costs, loss of use of the equipment, cost of any substitute equipment, facilities of services, or claims of your customers for such damages.

In case of a warranty claim return the instrument with original invoice of purchase.

Important

We recommend that to prevent faulty results in measurements please check your meter reading results within an adequate time period by the dry oven test according to the DIN 52 183 Standard, CM-Method (Building Materials).

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